Claims:

1. A pulp carboxylation system comprising

a pulp bleaching stage,

a washer following said pulp bleaching stage,

a first mixer following said washer,

a supply of basic material connected to said system whereby said base material will be mixed by said first mixer,

a second mixer following said first mixer,

a supply of carboxylation chemicals connected to said system after said first mixer whereby said carboxylation chemicals will be mixed by said second mixer,

a first stage reaction chamber following said second mixer,

a third mixer following said reaction chamber,

a supply of stabilizing material connected to said system after said reaction chamber whereby said stabilizing material will be mixed by said third mixer,

a second stage stabilizing chamber following said second mixer.

2. The carboxylation system of Claim 1 in which said reaction chamber is sized for a reaction time of no more than 15 minutes.

3. The carboxylation system of Claim 1 in which said reaction chamber is sized for a reaction time of no more than 2 minutes.

4. The carboxylation system of Claim 1 in which said reaction chamber is sized for a reaction time of no more than 1 minute.

5. The carboxylation system of Claim 1 in which said reaction chamber is sized for a reaction time of no more than 30 seconds.

6. The carboxylation system of Claim 1 in which said reaction chamber is sized for a reaction time of no more than 15 seconds.

7. The carboxylation system of Claim 1 in which said pulp bleaching stage is an extraction stage.

8. The carboxylation system of Claim 7 in which said stabilizing chamber is a chlorine dioxide bleach tower.

9 The carboxylation system of Claim 1 in which said pulp bleaching stage is a chlorine dioxide stage.

10. The carboxylation system of Claim 9 in which said stabilizing chamber is a chlorine dioxide tower.

11. The carboxylation system of Claim 1 in which said stabilizing chamber is a chlorine dioxide bleach tower.

12. The carboxylation system of Claim 1 in which said first mixer is a pump.

13. The carboxylation system of Claim 1 further comprising a pH meter at the exit of said reaction chamber.

14. The carboxylation system of Claim 1 in which said supply of basic material is selected from the group consisting of sodium hydroxide and sodium carbonate.

15. The carboxylation system of Claim 1 in which said supply of basic material is connected to said first mixer.

16. The carboxylation system of Claim 1 in which said supply of carboxylation chemicals is a sufficient amount of a primary oxidant selected from the group consisting of hindered heterocyclic oxammonium salts in which the carbon atoms adjacent the oxammonium nitrogen lack .alpha.-hydrogen substitution, the corresponding amines, hydroxylamines, and nitroxides of these oxammonium salts, and mixtures thereof, and a secondary oxidant selected from chlorine dioxide and latent sources of chlorine dioxide in a sufficient amount to induce an increase in carboxyl substitution in the carbohydrate of at least 2 meq/100 g.

17. The carboxylation system of Claim 1 in which said supply of stabilization chemicals is connected to said second mixer.

18. The carboxylation system of Claim 1 in which said supply of stabilizing materials are selected from the group consisting of an alkali metal chlorite, a peroxide, an acid, chlorine dioxide, a peracid and mixtures thereof.

19. The carboxylation system of Claim 1 in which said supply of stabilizing materials is selected from the group consisting of a peroxide, an acid, and mixtures thereof.

20. The carboxylation system of Claim 1 in which said stabilizing material is an acid.

21. The carboxylation system of Claim 1 in which said supply of stabilizing materials is connected to said third mixer.